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# Educational Pathways and Transition Modes in Canadian Post-secondary Education

## Note 4: Transitions Project

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1000 Sherbrooke Street West, Suite 800, Montreal, QC, Canada H3A 3R2  
Toll Free: 1-877-786-3999  
Fax: (514) 985-5987  
Web: [www.millenniumscholarships.ca](http://www.millenniumscholarships.ca)  
E-mail: [millennium.foundation@bm-ms.org](mailto:millennium.foundation@bm-ms.org)

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Pierre Doray, Élise Comoe, Claude Trottier, France Picard, Jake Murdoch, Benoît Laplante,  
Stéphane Moulin, Maxime Marcoux-Moisan, Amélie Groleau, Sylvain Bourdon  
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Prepared by :

Pierre Doray, Élise Comoe, Claude Trottier, France Picard, Jake Murdoch,  
Benoît Laplante, Stéphane Moulin, Maxime Marcoux-Moisan, Amélie Groleau,  
Sylvain Bourdon

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# Introduction

The purpose of this note is to empirically study how students journey through Canada's postsecondary education system. While the majority of young people follow linear educational pathways, some take other, more complex routes, punctuated by interruptions in studies or even returns to lower levels of education (Doray, Picard, Trottier, Groleau, 2009). Such pathways are increasingly frequent, for various reasons: uncertainty in professional and academic orientation, desire to take a break from studies, desire to work (in the case of those returning to studies later in life for adult education), and so forth. The first step to better understand how these educational pathways unfold is to determine, as accurately as possible, the true scope of discontinuous routes and to trace the educational pathways and transitions of young Canadians through the higher education system. Since education has a profound influence on individual life paths (Gaudet, 2007:21), it is vital to develop a deeper understanding of this biographical dimension.

This preliminary examination of educational situations will use data collected between 2000 and 2005 for Statistics Canada's Youth in Transition Survey (YITS), a longitudinal survey that includes two distinct cohorts. The first, collectively referred to as Cohort A, consists of young people who were aged 15 as of January 2000. The second, Cohort B, was comprised of young people aged 18–20 as of the same date. Data collected throughout the survey allowed us to perform a first analysis of significant transitions between secondary and postsecondary studies, interruptions to studies, and returns to studies. In our analysis, we apply the concept of *educational pathways*, defined as the sequence of educational situations reported by participants during the survey period. These situations are manifold and diverse. For example, participants may have been enrolled in an academic program; may have been at a college or a university; or may have exited the education system. The empirical definition of

“pathway” is thus based on two fundamental dimensions: enrolment in , and the level of education of such programs. Our study focuses on the continuation of studies and the transition to postsecondary education.

This research paper also strives to portray the situation across Canada in greater detail by examining the differences and similarities between provincial education systems. Under Canada's constitution, education is a provincial mandate. Consequently, each province has a distinct education system. While some differences are minor, others are much more significant. Educational research in Canada tends to draw comparisons across provincial boundaries, which presents certain challenges. For example, the existence of less populous provinces makes it difficult to conduct an effective comparison of the systems in place. Similarly, efforts to group systems geographically fail to take into account the specific institutional and organizational characteristics of each: is Manitoba's system similar to Alberta's simply because they are both Prairie provinces? Moreover, inter-provincial comparisons do not always bring to light the aspects of the systems that are common to several provinces. To mitigate the impact of these issues, we have compared the various provincial education systems in the aim of identifying “education system models”. We have grouped these systems according to the formal organization of their transitions and the pathways between the various levels of education. Part of our analysis includes the preliminary results of this proposed grouping of education systems.

The work described in this document is presented in four sections. As well as recapitulating the main theoretical underpinnings, the first section will provide a brief overview of YITS-based longitudinal studies. The second section will describe our methodological choices, including the main characteristics of the YITS and the variables used in analyzing

and operationalizing educational situations and pathways. The early results of this analysis are presented in the third section. We also provide a descriptive analysis of the pathways—the sequence

of educational situations reported by each survey respondent. The fourth and final section explores our hypothesis on the existence of three different education system models in Canada.



# I. Theoretical Framework

How should one analyze individual trajectories through Canadian postsecondary education? What concepts can be used to study this phenomenon? How have Canadian scholars used the YITS in their studies to date? How can one adequately compare pathways in the face of ten different provincial education systems? The following section describes the theoretical framework we developed in responding to these questions.

## I.1 Varied Notions of Educational Pathways

In Research Paper 3, we distinguished the various concepts and approaches related to the longitudinal analysis of individual progression through higher education (Doray, Picard, Trottier, Groleau, 2009). In the following paragraphs, we will briefly recapitulate these theoretical elements.

A first concept used in the longitudinal analysis of education in Canada is that of the *academic track*. This term is generally associated with the concept of an individual's progress through the education system. Paths are defined as *étapes successives franchies tout au long de sa fréquentation du système scolaire* ["successive steps taken during the individual's progress through the school system"] (Sylvain et al., 1985, p. 43). The analytical process entails examining how schooling unfolds and interpreting various aspects of the education system: the transition from one level of education to another (primary/secondary/post-secondary), the passage from general education to technical training, and so on. This approach brings out the complexity of the individual's educational stages while highlighting the evolving differences between social groups within the education system. However, since the pathway concept is defined in terms of the education system's formal structure, this approach is less likely to account for non-linear pathways.

Other studies focus on the notion of *trajectory*. Bourdieu (1979) broadly defined this term as the succession of positions each individual occupies on the social ladder during the course of his or her lifetime, along with the different social spheres within which this progression takes place. Thus, there are trajectories of authors, scientists, artists and so forth. Each individual trajectory is significantly affected by social origin, which determines the slope and establishes possible destinations. This is in turn embedded within the family's overall trajectory, which may be ascending or descending within the overall social structure. Since trajectories are defined in terms of particular areas of activity, discipline-specific "game rules" are also factors. The *educational trajectory* refers to a succession of positions within the overall educational field, and more precisely within the education system. Such trajectories vary depending on the social origins of their agents, who go through a succession of situations determined by the education system.

Gorard et al. (1997a/b/c/d, 1998, 1999) took a similar approach, but rather than limiting themselves to the situations encountered within the education system, they considered such situations over the course of a lifetime. Consequently, their *learning trajectories* also include educational and training activities. Such trajectories are largely determined by social origin and by each family's educational history; in this sense, they are close to Bourdieu's approach. Though there may be variations and exceptions, social origins retain a strategic weight in how the trajectory unfolds.

Before adopting the notion of trajectory, Bourdieu and Passeron (1970) used the concept of the *carrière scolaire* ["educational career"], which they identified by the different steps in an individual's schooling. Falling behind, moving to subsequent levels or choosing certain fields were used as significant indicators of the educational career. This first interpretation of the concept approaches the notion of

the pathway. However, the authors then distance themselves by seeking also to understand the mechanics of determination — i.e. the various factors that influence the positioning of agents in the education system.

For Bloomer and Hodkinson (1999), the notion of the *learning career* draws on theoretical sources. In the model used by interactionist sociologists, a “career” refers to the series of passages from one position to another by a worker in a professional system (Becker, 1970:47). The term also considers the impact of events and circumstances on the situational sequence. Bloomer and Hodkinson uphold the idea that the career is composed of two parts: the *objective* situations in which individuals are involved and the *subjective* meaning individuals ascribe to their situations. The authors also draw on the notion of “situated learning,” in which new influences and new sources of learning bring about changes to individual attitudes. Lastly, they take into account Bourdieu’s contribution, integrating into their understanding of “career” the effect of social origins as seen through the construction of *habitus* (including educational *habitus*), defined as the provisions governing schooling and education. Nonetheless, their notion of *habitus* appears somewhat more flexible than does Bourdieu’s, as they believe it to be affected by the learning situations that take place throughout an individual’s lifetime.

The various concepts presented above are largely anchored in specific theories (e.g. the interactionist concept of career). However, some conceptual ambiguity persists, since the proponents of one approach at times employ two different concepts to analyze an individual’s educational progression (this is the case with Bourdieu, who, at different times, uses the concepts of “career” and “trajectory”). In the present theoretical context, we prefer another phrase: the *educational pathway*, defined as *a series of educational situations that occur within the framework of formal training and the school system*.

*Pathways* reflect the flexible ways in which the different stages of an individual’s education unfold. Pathways do not necessarily consist of a progressive succession of steps or situations; they may also have a non-linear character.

This approach is original in that it allows for the differentiation of pathways based on the respective weight of the factors in their construction and unfolding. Participation in schooling depends on a variety of factors that affect the individual at different points in his or her life, some of which relate to past experience. Various forms of social anchorage, including prior education, are also at play; still other factors are rooted in current experience. Thus, both educational and non-educational events can cause pathway bifurcations, such as changes in orientation or exits from the school system. Lastly, it is important to consider the role of individual plans and projects.

## 1.2 The Analysis of Educational Progression Based on the YITS

Bibliographical research on pathway and track analyses using the YITS data led to four texts that involve longitudinal studies.

Shaienks and Gluzynski (2007) carried out a descriptive study of participation in higher education, based on data gathered from youth aged 18–20 as of December 1999 in Cohort B (Cycles 1–4). In December 2005, the authors analyzed the characteristics of three groups of students: *graduates*, *continuers* and *dropouts*. Their study examined demographic and family characteristics, participation in high school, academic performance and experiences during the first year of postsecondary education. The authors concluded that access to postsecondary education and persistence in study are affected by a variety of social anchorages (e.g. differences between men and women, social origins, etc.), previous educational experience and living conditions.

Finnie and Qiu (2008) likewise used the YITS data from Cohort B (Cycles 1–4) to study trends related to persistence in postsecondary education. Based on the group of respondents who were in school at the start of the study, they defined four situations in each cycle that measured an aspect of persistence: graduating, continuing, switching and leaving. Despite certain methodological limitations, notably regarding changes to independent variables over

time, the authors used a risk model based on multinomial logit regression. Their analysis showed that persistence varies according to province of residence, ongoing educational experience (the further students advance in their studies, the lower their chances to drop out), family structure, social origins, and living conditions.

Using data from Cohort A of the YITS, Christofides et al. (2007) studied the gender-dependent evolution of university aspirations. The authors examined factors that contributed to the development of aspirations to enter university, as declared at the ages of 15 and 17, and analyzed the effect of these aspirations on the likelihood of undertaking university studies at the age of 19. In this regard, they were interested in — among other factors — the effects of variables related to family origins and school characteristics. In the probit analyses specific to each gender, the authors constructed a series of models in which they estimated the effects of their principal independent variable — aspirations concerning university education, as expressed at age 15 — as well as the other independent variables related to undertaking university studies at age 19. They conclude with a “global” model that takes into account intentions, as expressed at ages 15 and 17, to undertake university studies when aged 19.

Finally, Ma and Frempong (2008) studied the non-completion of postsecondary education, basing their

work on data from the first three YITS cycles (Cohort A). The authors applied the Cox regression model to a monthly analysis of postsecondary enrolment rates. Their results chiefly demonstrated that the support offered by the institution at which the individual was studying had no effect on attrition, whereas coming from a rural background and undertaking postsecondary studies later in life increased dropout risk. In contrast, having high aspirations, good study habits, good marks in high school and no signs of risky behaviour all reduced the probability of dropping out. Capacity for postsecondary studies, social networks, attitudes toward higher education, financial status, personal obligations, educational program characteristics and early educational experience were also linked to the non-completion of studies.

To summarize, these four studies use a variety of methods to highlight different dimensions of student pathways. However, the paucity of studies confirms that longitudinal approaches of this kind are relatively rare. That said, from the descriptive analysis performed by Shaienks and Gluzynski (2007) to the multinomial logit regression carried out by Finnie and Qiu (2008), the studies that do exist are quite diverse.

Like these existing studies, this research paper analyzes respondents’ educational situations at each collection cycle. However, it also conceptualizes and recreates their pathways between cycles 1 and 4 of the YITS as they progress through the education system.



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## 2. Methodological Considerations

From the start, the *Transitions* project was intended as a secondary analysis of data produced by previously completed qualitative and quantitative studies as well as from other sources, such as administrative data. In this research paper, the descriptive analysis of educational pathways was conducted using data from the Youth in Transition Survey (YITS). This longitudinal study provided us with the data required for a secondary analysis of the educational pathways taken by young Canadians.

The use of previously gathered data has undeniable advantages, such as immediate access to a database without the need to design and administer questionnaires (Kiecolt and Nathan, 1985). However, it also imposes certain limitations. Firstly, the available data was generated from two groups of young Canadians who, while of similar ages, were at different points in their education at the survey's outset. This immediately created a certain amount of pathway variation. Secondly, the YITS was not designed with our specific research needs in mind. For instance, it can be difficult to derive the significance of events from quantitative analyses that do not take into consideration the “subjective” dimension. However, the articulation between objective events, situations and facts and the subjective meanings assigned to them by survey participants is significant within the overall methodological framework used for our study.

A major challenge in methodological terms involved describing the different educational pathways of young Canadians, along with the associated difficulty of establishing the most common pathways in postsecondary education. Rindfuss, Swicegood and Rosenfeld (1987) clearly demonstrated the significant variations in educational pathways in a longitudinal study of some 14,000 students, in which they identified thousands of different pathways. Furthermore,

the imprecise nature of the educational variables in certain parts of the YITS did not enable a clear reconstruction of the sequence of educational events between January 2000 and December 2005 — the subject of this research paper. However, despite the limitations imposed by our methodological choices (e.g. secondary analysis), the diversity of questions and themes addressed in the YITS along with access to several years of data from two cohorts of students of different ages did allow us to identify the main educational pathways undertaken by the young people and to observe their transitions to postsecondary studies.

### 2.1 Introduction to the Survey

The Youth in Transition Survey (YITS) is a national<sup>1</sup> longitudinal survey carried out by Statistics Canada. The survey began in 2000 (Cycle 1), with subsequent data collection cycles in 2002, 2004 and 2006 (Cycles 2, 3 and 4, respectively). Data was collected on a bi-annual basis from two cohorts of young Canadians, representing two different age groups. Each cohort also answered a slightly different set of questions. The first, referred to as Cohort A, was made up of young people, born in 1984, who were 15 years old as of December 31, 1999 and who had formerly participated in the Program for International Student Assessment (PISA 2000). Cohort B was made up of young people born between 1979 and 1981, thus aged between 18 and 20 as of December 31, 1999. They were selected from Labour Force Survey (LFS) participants from the period between January 1997 and December 1999. As of Cycle 4 (2006), the database used

1. Survey data was gathered from across Canada, excluding the northern territories, First Nations reserves, Canadian Forces bases and certain remote regions.

in this research paper included 18,843 respondents for Cohort A and 12,045 for Cohort B.

In each survey cycle, respondents from both cohorts were questioned on their professional and academic experience as well as on personal characteristics. The study included a range of factors liable to affect major transitions, including family and educational background, professional and academic aspirations and extracurricular activities. Besides the questionnaires completed by the young people, data were also collected from the parents of Cohort A participants. Among other variables, this data included information concerning the family's social and economic situation, family structure and history, and the parents' expectations and aspirations with regard to their children's academic future.

In this research paper, the data used to describe educational pathways were taken from both cohorts through four survey cycles spanning six years (January 2000 to December 2005).

## 2.2 Operationalizing the Concepts

We established the situation and educational pathway variables by combining different data related to individual education patterns. The following eight variables — two of which are related to specific months and years — were used (see Appendix 1):

- **Postsecondary education status**, distinguishing between postsecondary graduates, continuers and dropouts. As the phrase suggests, this question was addressed to respondents who were enrolled in a postsecondary program of study in the year preceding the collection period.
- **Full-time equivalent enrolment status** indicates whether the respondent was enrolled in a full-time elementary school, high school or postsecondary education program during each month of the year.
- **Reported levels of study** refers to the program in which each student was enrolled during the data collection period, as well as those in which he or she had been enrolled since the previous cycle. Note that certain academic programs are considered as postsecondary in some provinces but not others. For example, in Quebec, the Attestation of Vocational Specialization (AVS) is awarded at the end of high school. As a result, we grouped levels of study into high school programs, college programs and university programs.

Our initial goal in establishing variables to describe academic situations was to determine respondents' yearly postsecondary education status. Next, we collated all the academic programs in which respondents had enrolled. For each program, we determined the start and end dates (month and year). Each program was then classified according to the appropriate level of study (see Appendix 1 for the different categories). We adopted a different program classification model than the one used by Statistics Canada, in which certain Quebec high school programs are considered as postsecondary programs. It goes without saying that this would affect our results, particularly in regards to Quebec.<sup>2</sup> This first step allowed us to determine, for each of the 72 months of the study (January 2000 to December 2005), whether respondents were in school or not, and if so, to determine their level of study (high school/college/university).

- **Month and year** of entry into a postsecondary program
- **Month and year** of final enrolment in a post-secondary program
- **High school status** as of December 2003. This variable distinguishes between high school graduates, continuers and dropouts.

2. The following classification system was used for Quebec students:

**High school** — Attestation of Vocational Specialization (AVS), Registered Apprenticeship program

**College programs** — diploma or certificate from a private commercial school or a private training facility, college or CEGEP program, university transfer program at a college or CEGEP (for credits, university transfer diploma or Associate's Degree), college post-diploma or graduate level program (prerequisite: college diploma or higher) and other postsecondary levels

**University programs** — university diploma or certificate below bachelor's degree (undergraduate level), bachelor's degree, first professional degree, graduate-level diploma or certificate above bachelor's/below master's, master's degree, doctorate (PhD), diploma, certificate or license from a professional association (e.g. accounting, banking, insurance)

To derive pathway variables, we made use of a classification algorithm<sup>3</sup> or multiple decrement process. This allowed us to enumerate all possible states over the six years of the study, namely:

- Enrolment/non-enrolment in an academic program
- In high school/in a postsecondary program/non-enrolment in an academic program
- In high school/in a college program/in a university program/non-enrolment in an academic program

The next step was to manually group the sequences or series of situations according to pathways.

1. Overall educational pathway or school attendance (enrolment/non-enrolment in an academic program). This first variable allowed us to establish three typical pathways: a) *linear* or *continuous* pathways, in the case of those who remained enrolled in an academic program throughout the observation period; b) *interrupted* pathways for those who temporarily left the school system but returned as of 2005; c) *exit* pathways for those who were no longer enrolled in an academic program as of 2005.
2. Pathways according to the level of study, taking one of three forms: high school, postsecondary, or non-enrolment in an academic program. We sought to describe transitions to postsecondary programs, exits with or without the transition to postsecondary studies, and interrupted pathways. We also looked at pathways involving a return to a lower level of study.
3. Pathways based on specific educational level: high school, college, university or non-enrolment. This primarily served to define transitions to college, transitions to university and exit pathways.

The analysis of these variables is solely descriptive. We developed simple frequency tables and cross-tabulations to show the situation in each of Canada's three main types of education system.

3. More specifically, two methods of classification can be used. The first method consists of generating a continuous variable or "string" that stores all elements in a sequence. For example, consider the strings 111111 and 110011, where 1 signifies enrolment in an academic program and 0 signifies non-enrolment. The first string indicates that the person was continuously enrolled in an academic program during the six-year observation period, whereas the second person interrupted their studies for two years before returning to school. The second method of classification uses a specific module in the STATA software (sqtab), which yields sequences of episodes. For the two strings described above, this second method yields 1 and 101, respectively.
4. Graphic showing changes in respondents' status over time.
5. Graphic showing changes in respondents' status over time, in which each horizontal line corresponds to one individual.

## 2.3 Pathway Analysis

From an operational point of view, pathways are defined by students' educational situations at different points in their academic careers. To study this series of situations over time, we used a descriptive longitudinal analysis. Depending on the chosen construction models, degrees of detail in the pathway's description may vary. It is thus pertinent to distinguish between exhaustive and synthetic representations of pathways, as each has certain advantages and disadvantages. We will look at each in turn.

### 2.3.1 Exhaustive Representation

The construction of pathways is considered exhaustive when information concerning respondents' educational status is tabulated on a monthly basis. The YITS data supports this kind of pathway analysis, since monthly data is available for both Cohorts A and B. When graphically represented (chronogram<sup>4</sup> or sequence diagram<sup>5</sup>), this type of descriptive analysis supports fine-grained observation of all changes in students' educational status over the full six-year data collection period. However, this results in some methodological constraints, as the observed situations are multiplied over 72 months.

The chronograms reproduced below (Figure 1) show the month-by-month educational situation of respondents from Cohort A. The information presented is twofold: the decreasing proportion of enrolment over time, and the summer vacation period. Note that summer interruptions to study also decrease over time. The second chronogram highlights the progression of postsecondary studies between 2000 and 2005.

### 2.3.2 Synthetic Representation

Synthetic pathway construction begins with the selection of a date during the year that is meaningful in terms of an individual's lived experience. The

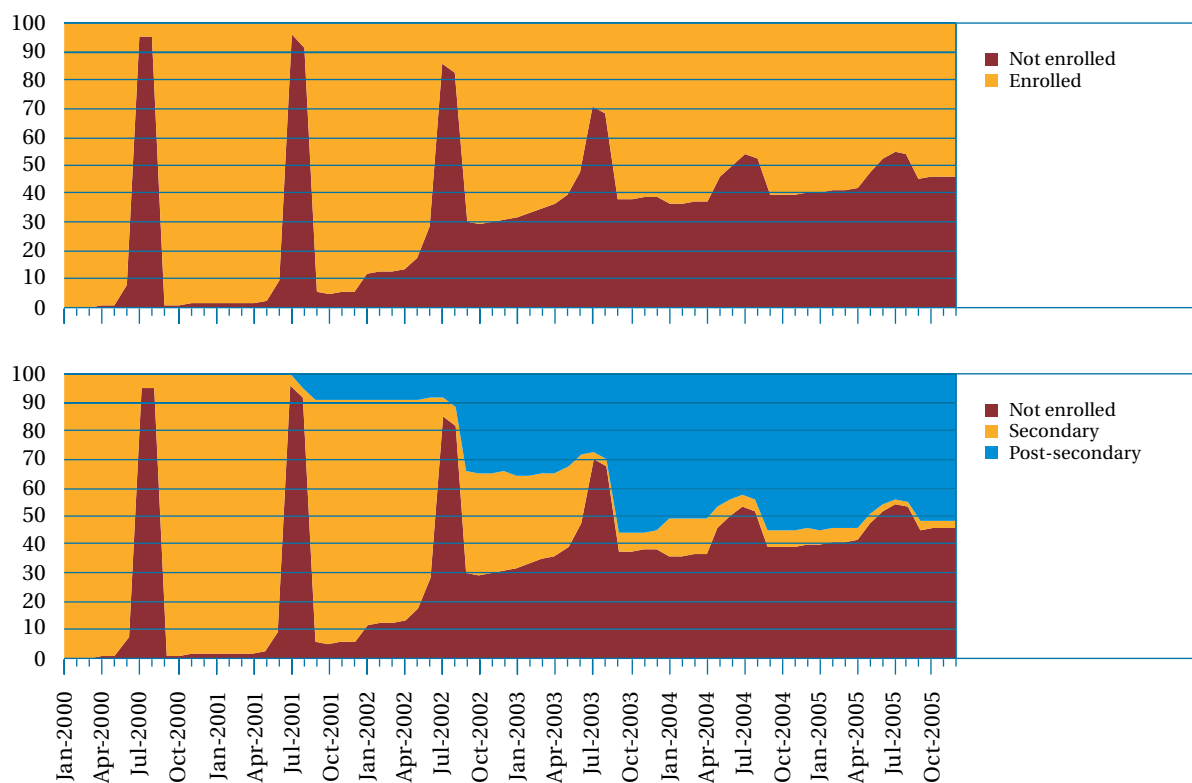
analysis then looks at how certain characteristics change over the course of several years, relative to the chosen yearly date. The objective is to record both continuity and change. With regard to the educational calendar (start of the school year, date of first evaluation, course drop deadline, and so on), the best point from which to study the educational situation of Canadian students is in October, a few weeks after the start of the fall semester.

While it is now possible to enter postsecondary studies in the winter semester (January), the majority of students begin their programs in September. Data for enrolment in Quebec CEGEPs demonstrate this clearly. Enrolment is always higher in September than

in January (Figure 2), whether students are enrolling in CEGEP for the first time (population A) or in their first CEGEP semester after a prior college experience (population B).

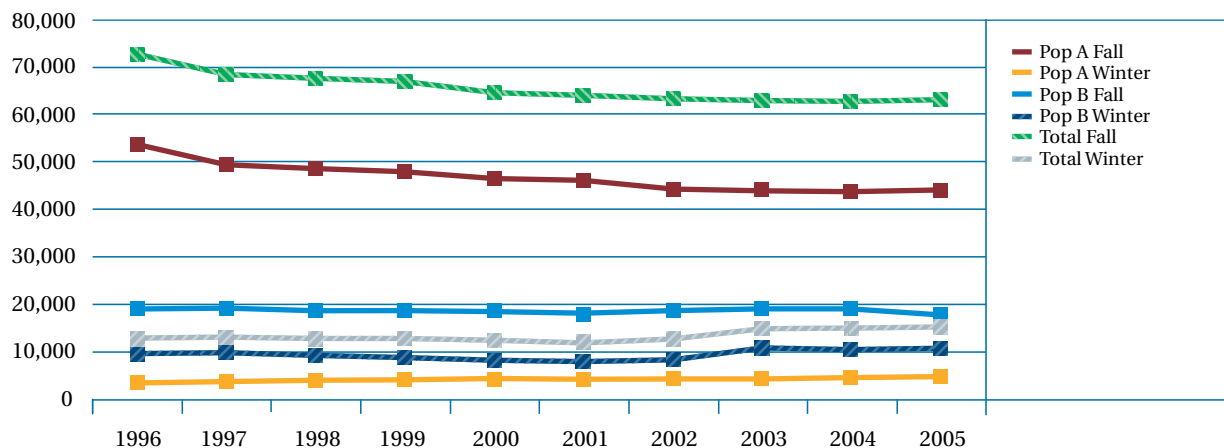
Furthermore, respondents who dropped out of programs after a brief enrolment period (i.e. between September and October) are not considered as students. October also predates the first formal evaluations, when disappointing results can incite some students to rapidly withdraw from the school system.<sup>6</sup> In short, only those who remained in their academic programs for more than a few weeks are considered as students.

**Figure 1 — Chronogram Indicating Enrolment in a Course of Study, January 2000–December 2005 (Cohort A)**



6. In fact, the number of students enrolled in academic institutions drops significantly between October and December.



**Figure 2 — Enrolment in Quebec's Public CEGEPs by Population and Semester**

Source: Service régional des admissions de Montréal.

To examine the evolution of educational situations each October in the YITS, we used a multiple decrement process followed by a classification algorithm. These tools show variations in student situations over the entire observation period; they also provide a clear view of the pathways up to the final survey response.

Each October, respondents' situations were analyzed based on the following criteria:

- enrolment or non-enrolment in an academic program
- the level of study, distinguishing between high school and postsecondary (transitions to postsecondary studies can be discerned by looking at three situations: high school enrolment, the passage to postsecondary education and exits from the school system)
- the level of education (high school, college or university)

It is also possible to examine pathways by tracking status from year to year. For example, respondents were considered to have taken a continuous pathway through the school system if, each October, they were

enrolled in an academic institution. If their studies were interrupted one or several times during the six years covered by the survey, we would consider this to be a discontinuous or broken pathway. We can likewise consider whether respondents left the education system before or after receiving a diploma. Pathway analysis can also take into account the level of study and the level of education. Some students go from high school directly to university, whereas others proceed from high school to college and then on to university. Still others go from college to university after an interruption of a certain length. Once the levels of study and education are taken into account, the pathway possibilities become quite numerous.

Results from the synthetic pathway analysis are presented in two distinct steps. Section 3.1 looks at the overall dynamics of different educational situations as of each month of October. This is not a longitudinal analysis in the strict sense of the term. Rather, we looked at the year-by-year situation of each individual in order to conduct a transversal comparison and understand the weightings of different situations. In section 3.2, we look at pathways in terms of continuity and the educational sequence.





This cohort was made up entirely of young people in the education system as of January 2000. In October of the same year, 99% of respondents were still in school — an unsurprising result, given that, at this age (15–16), education is still compulsory. We can extrapolate that the majority of those who were not in school had most likely dropped out.<sup>7</sup> In the following year, another 5% followed suit, bringing the total number of dropouts in October 2001 to 6%. One year later, in 2002, the percentage increased significantly, to 30%. The completion of high school is clearly a point at which a substantial proportion of young people leave the education system, temporarily or otherwise. Enrolment rates continue to decrease through to 2005, at which point 54% of respondents were in an academic program and 46% were not.

The cohort's passage to postsecondary education began in 2001, by which point 11% of respondents had made the transition (Table 2). It is likely that the majority of these students came from Quebec, where students begin postsecondary studies one year earlier than is the case in other provinces. The percentages of students who remained in high school through 2003, 2004 and 2005 may include students from Quebec who enrolled in vocational training programs offered at the high school level.

The distinction between college and university programs shows that a first contingent of students arrived at university in 2002, and a second the following year (Table 3). The first of these probably represents students from various Canadian provinces who completed high school in June 2001 and entered university that fall. Note that in 2002, college

enrolment was proportionally higher than university enrolment, due to student access to community colleges and the Quebec CEGEP system. The following year, the situation was reversed, with more students in university than in college. At this point, many CEGEP students had finished their pre-university studies and entered university. The peak of enrolment in Canadian college programs was in 2003, whereas university enrolment statistics increased slightly in 2004 and 2005.

### 3.1.2 Cohort B

Aged between 18 and 20 as of January 1, 2000, Cohort B respondents were not necessarily enrolled in an academic program when the survey began. They had completed their compulsory education and their educational histories were varied. Some were high school dropouts while others had never taken a break from studies. The diversity of situations was therefore higher than was the case with Cohort A. The age range (18–20) also had consequences for their educational status. For instance, by the age of 20, many had obtained a professional or technical diploma, which is not the case for 18-year-olds. As such, we could expect a series of educational situations very different to those of Cohort A.

If respondents began at different points in January 2000, a majority of them (55%) were enrolled in an academic program 10 months later (Table 4). This statistic was reversed two years later, at which point 55% of respondents were no longer in an academic program. The latter percentage increased steadily

**Table 3 — Enrolment in College and University Programs, 2000–2005, Canada, YITS Cohort A (%)**

	2000 aged 15–16	2001 aged 16–17	2002 aged 17–18	2003 aged 18–19	2004 aged 19–20	2005 aged 20–21
High school	99	83	35	5	6	3
College	0	10	20	26	20	15
University	0	1	15	33	34	36
Not enrolled	1	6	30	36	40	46
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

7. Note that this sample underestimates dropout rates, since it excludes those who had already done so.

between 2002 and 2005, ultimately reaching 77%. At this point, respondents were between 23 and 26 years old, and many had completed their post-secondary studies, including university.

High school enrolment for respondents from Cohort B dropped to 9% in 2001, compared to 25% in 2000. The latter figure may have reflected professional training or students returning to high school to obtain a diploma that would permit them to pursue further studies (Table 5). Thirty percent of respondents were enrolled in a postsecondary program as of 2000. This proportion increased to 42% in the

following year, remaining stable in 2002 before dropping to 22% in 2005.

Overall, a low percentage of Cohort B respondents reported college-level studies: between 7% and 14% over the course of the survey (Table 6). Many of these may have been Quebec CEGEP students. The proportion of university students was 22% in 2000. This remained stable or even increased through to 2003, after which it dropped to a low of 15% in 2005.

This preliminary analysis suggests that returns to study were relatively common, as were exits after obtaining a diploma.

**Table 4 — Enrolment in an Academic Program, 2000–2005, Canada, YITS Cohort B (%)**

	2000 aged 18–21 <sup>8</sup>	2001 aged 19–22	2002 aged 20–23	2003 aged 21–24	2004 aged 22–25	2005 aged 23–26
Enrolled	55	51	45	36	29	23
Not enrolled	45	49	55	64	71	77
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Table 5 — Enrolment in Academic Programs by Level of Study, 2000–2005, Canada, YITS Cohort B (%)**

	2000 aged 18–21	2001 aged 19–22	2002 aged 20–23	2003 aged 21–24	2004 aged 22–25	2005 aged 23–26
High school	25	9	3	1	3	1
Postsecondary	30	42	42	35	26	22
Not enrolled	45	49	55	64	71	77
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Table 6 — Enrolment in Academic Programs by Type of Postsecondary Institution, 2000–2005, Canada, YITS Cohort B (%)**

	2000 aged 18–21	2001 aged 19–22	2002 aged 20–23	2003 aged 21–24	2004 aged 22–25	2005 aged 23–26
High school	25	9	3	1	3	1
College	8	13	14	11	8	7
University	22	29	28	24	18	15
Not enrolled	45	49	55	64	71	77
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

8. Cohort B respondents were aged 18, 19 and 20 in January 2000. In October of that year, those with birthdays in November were still 18 years old. Conversely, respondents who were 20 in January and whose birthdays fell between January and October would have been 21 years old by October 2000. In this and the following tables relating to Cohort B, the same logic is applied to each transverse layer.

## 3.2 Educational Pathways

The information presented in the preceding section sheds light on the distribution of educational situations for each year of the survey period. However, this tells us nothing of how individuals evolved within the education system. In this sense, the prior sections can be considered as a time-based comparison that sets the stage for the real longitudinal analysis presented in this section. Here, pathways are empirically defined as the sequence of individual educational situations reported by survey participants in October of each year. Pathways thus combine enrolments in and exits from the education system with the situations that occur within it.

### 3.2.1 Cohort A

A preliminary synthetic representation of student pathways highlights enrolment continuity, interruptions and exits. Among 54% of respondents who were enrolled in an academic program in 2005, 40% had continuous pathways with no interruptions, whereas 14% interrupted their studies before re-enrolling (Table 7). Of the 46% who were not in an academic

program in 2005, 39% were in continuous pathways before exiting the system, while 7% alternated between enrolment and non-enrolment, a situation that persisted through 2005.

We can distinguish between pathways according to their linearity or the continuity of situations from year to year. To start with, note that 1% of respondents had already left the education system as of October 2000. Seventy-eight percent of respondents reported linear pathways marked by a direct transition from high school to postsecondary education. Four out of ten respondents reported continuous pathways through the education system and were still enrolled in an academic program as of December 2005. Almost as many (38%) reported continuous pathways prior to exiting the school system, as typified by bridge-to-work program graduates. Lastly, 20% of young people had left their studies and later returned, whereas only 1% had returned several times.<sup>9</sup> We should keep in mind that in Canada, one survey participant in five returns to the education system after an interruption — a statistical minority that is nonetheless significant.

**Table 7 — Respondent Pathways, Canada, YITS Cohort A (%)**

Pathway		Canada	
Continuers in 2005	Continuous pathway in the system from 2000 to 2005	40	54
	Enrolled in the system in 2005 with interruptions	14	
Leavers in 2005	Exit from the system after a continuous pathway	39	46
	Exit from the system after an interrupted pathway	7	
Total		100	100
Linear pathways	Linear pathways	40	78
	Exits without return	38	
Non-linear pathways	Re-enrolment after an interruption	20	21
	More than one re-enrolment	1	
Premature exits	Exits after January 2000	1	1
Total		100	100

9. Bear in mind that the methodology used for the present analysis does not necessarily include every interruption to studies, as students' educational situations are examined only once per year, in October. For example, if a student left the school system in January and re-enrolled in September of the same year, this would not be considered an interruption to studies.

Introducing the level of study or of education allows us to more precisely map the educational pathways (Table 8). Overall, almost one in four respondents did not go on to postsecondary studies following high school. Some entered the labour market while others undertook professional training<sup>10</sup> or workplace training programs. Meanwhile, 70% of respondents began postsecondary studies between 2000 and 2005 (Table 8). Of these, 54% (= 38 + 12 + 4) were still enrolled at the end of the survey period while 30% were not. The latter had either entered the labour force after completing their studies and receiving a diploma, or had dropped out of their programs prior to completion. In sum, the transition to postsecondary education (PSE) takes one of three different forms:

1. Direct transition to PSE (38% of respondents)
2. Direct transition to PSE followed by an exit (20% of respondents, of whom most undertook college-level studies)
3. Transition to PSE after an interruption of studies (12% of respondents)

Numerous students had non-linear pathways and returned to postsecondary studies after an interruption. This may have been voluntary (a hiatus for work or travel) or enforced, as in the case of a professional reorientation, where a student is obliged

to wait before enrolling in a new program of study. Other students had non-linear pathways involving a return to studies at a lower educational level (for instance, beginning university studies, then deciding to seek technical training at a college). In Quebec, a student may also leave college to seek out vocational training, which is offered through the high schools. These latter cases comprised 4% of respondents. Finally, note that 2% of student pathways did not fall under any of the categories listed above.

### 3.2.2 Cohort B

In contrast with Cohort A, respondents from Cohort B were not necessarily enrolled in the education system at the survey's outset. Cohort B is a representative cross-section of Canada's population aged 18–20 as of December 31, 1999.

Pathway analysis of respondents from Cohort B shows that 70% were enrolled in an academic program at some point during the six-year observation period, leaving 30%<sup>11</sup> who were never enrolled (Table 9). Of those who had at some point enrolled, 22% were still enrolled as of 2005; of these, 13% had at some point interrupted their studies and 9% had been continuously enrolled. 48% of those who had been at some point enrolled were no longer in school as of 2005, with the majority of these (36%) having exited

**Table 8 — Transitions to Postsecondary Studies, Canada, YITS Cohort A (%)**

		Canada %	
Direct transition to PSE	High school–college	7	38
	High school–university	24	
	High school–college–university	7	
Direct transition to PSE followed by exit	High school–college–exit	15	20
	High school–university–exit	5	
Transition to PSE after an interruption	High school–interruption–college	7	12
	High school–interruption–university	5	
No transition	High school–exit	24	24
Return to a lower level of education		4	4
Other situations		2	2
Total		100	100

10. In Quebec, vocational training is offered in high school.

11. The analysis in the preceding section would suggest that at least 45% of youth in Cohort B had not undertaken postsecondary studies. Taking pathways into account allows a better understanding of transitions to postsecondary studies during the study period.

the education system after continuous presence. Overall, 45% of respondents reported continuous pathways, 13% reported a return to studies and 12% reported multiple alternations between periods of study and non-enrolment. One in four respondents returned to study at least once between 2000 and 2005.

We can be more precise with regard to the nature of the pathways by taking the level of education into account (Table 10). This allows for the construction of more fine-grained pathways. Of the respondents, 30% did not enrol in an academic program between 2000 and 2005; 14% (= 6 + 8) returned to school, at least for a time; 40% were no longer enrolled following a period of study; and 16% were continuously enrolled throughout the observation period.

Of all respondents who enrolled in an academic program during the survey period, 13% (= 1 + 2 + 10) had not enrolled in a postsecondary program. Of the 57% who had, note that:

- 11% had returned to postsecondary education, 5% were still enrolled as of 2005 while 6% had already left the system
- 30% (= 6 + 15 + 9) had been continuously enrolled in postsecondary studies and had exited following a period of continuous study
- 16% had been continuously enrolled in postsecondary studies and were still enrolled as of 2005.

### 3.3 Summary

The longitudinal analysis of educational pathways can be based on an exhaustive representation, which

is to say a month-to-month examination of individual educational situations. Such a process would allow us to see all movements over a given period and determine the effects of concomitant factors liable to influence the nature and slope of the educational pathway. However, in this case, analytical complexity increases as the period of observation lengthens, and the fact that some events are more significant than others is not taken into consideration. A synthetic pathway representation allows us to avoid these problems. Though it tends to impoverish the data somewhat, this can be mitigated by careful selection of events and situations.

We chose to begin our analysis of respondents' educational situations by examining their enrolment status in each October of the study period (2000–2005). Initially, our analysis was mainly transversal, examining the annual distribution of respondents' status with regard to several factors, namely, enrolment, level of study and level of education. Subsequently, we recreated pathways by grouping together the observed sequences of educational situations.

We examined pathways for both cohorts of the YITS. Cohort A was made up of high school students aged 15 as of December 1999, who completed biographical questionnaires during four successive study cycles. Cohort B was a representative sample of the 18- to 20-year-old Canadian population that did not take into consideration respondents' educational status at the outset of the survey period. Thus, the two cohorts varied not only in age, but also in their situations with regard to both the education system and the labour market at the start of the observation period.

**Table 9<sup>12</sup> — Respondent Pathways, Canada, YITS Cohort B (%)**

		Canada	
Continuers, 2005	Continuous enrolment from 2000 to 2005	9	22
	Enrolment in 2005 with interruption of studies	13	
Leavers, 2005	Exit after continuous enrolment in the education system	36	48
	Alternating periods of enrolment followed by an exit in 2005	12	
Never enrolled			30
Total		100	100

12. This is not identical to Table 7, since it takes into consideration the fact that certain respondents from Cohort B could be out of the school system, which is not the case for respondents from Cohort A.



**Table 10 — Transitions to Postsecondary Education by Respondents Aged 18–20, Canada, YITS Cohort B (%)**

		Canada %	
Re-enrolment	High school	1	6
	College	3	
	University	2	
Re-enrolment followed by exit	Non-enrolment–high school–exit	2	8
	Non-enrolment–college–exit	5	
	Non-enrolment–university–exit	1	
Exit after studies	High school–exit	10	40
	College–exit	6	
	University–exit	15	
	Other pathway with exit	9	
Continuous enrolment without exit	High school–college	2	16
	High school–university	5	
	Other educational pathways	9	
Never enrolled		30	30
Total		100	100

As the situational and pathway analyses clearly show, variations in the mode of sample selection led to very different results in both cohorts. For example, 99% of respondents from Cohort A were enrolled in an academic program in October 2000, whereas this was only true of 55% of Cohort B respondents. By the end of the observation period (2005), 54% of respondents from Cohort A, then aged 20–21, were still enrolled in an academic program. For Cohort B, aged 23–26 at the same point, the equivalent statistic was just 22%.

For respondents in Cohort A, exits from the school system went from 5% in 2001 to 29% in 2002, which leads us to believe that the end of high school is considered a “favourable” moment to leave the education system. In other words, we wonder whether structural transition points, like the passage from high school to postsecondary education, are key points for exiting from the education system, be it temporarily or permanently.

In Cohort B, exits from the school system do not follow the same trend; rather, they occur throughout the observation period. A large majority of those enrolled in an academic program were in either a college or university program. Respondents were at different stages in their academic careers, partially due to age (those aged 20 had two years more of

study behind them), and partially due to variations in the rate at which they progressed through the education system. Since exits occurred throughout the observation period, it is impossible to identify any structural transition effects. However, the significance of re-enrolment is undeniable: nearly one in four respondents re-enrolled at least once.

Overall, Cohort A enrolments in postsecondary programs increased until 2003, at which point 59% of respondents (then aged 18–19) were in such programs. After that, the percentages diminish. Enrolment also varied with the study level. College enrolment increased to 26% of respondents in 2003, then decreased thereafter. The trend is quite different with regard to university enrolment, which continued to rise until 2005, at which point 36% of respondents were enrolled. This trend is linked to the age at which students have access to postsecondary studies. For example, in Quebec, students enter college at a younger age (after 11 years of study) and university at an older age than is the case in other provinces. Structural differences between education systems thus largely explain the enrolment trends at the various levels of postsecondary education. In the case of college studies, we must also consider leavers who graduated with a diploma as well as those who entered the labour force after completing a technical

**Insert 1 — Analysis of Situational Evolution: An Overview**

	<b>Cohort A</b>	<b>Cohort B</b>
Enrolment	<ul style="list-style-type: none"> <li>• In October 2000, 99% of respondents were enrolled in studies.</li> <li>• There was a progressive reduction in enrolment with a discontinuity between 2001 and 2002.</li> <li>• As of 2005, 54% of respondents were enrolled in studies.</li> </ul>	<ul style="list-style-type: none"> <li>• In 2000, 55% of respondents were enrolled in studies. This decreases throughout the observation period, reaching 23% in 2005.</li> </ul>
Postsecondary enrolment	<ul style="list-style-type: none"> <li>• The percentage of students in postsecondary programs increased until 2003, and then diminished.</li> <li>• The highest rate of enrolment was 59% in 2003.</li> </ul>	<ul style="list-style-type: none"> <li>• 30% of respondents were enrolled in postsecondary programs as of 2000. This proportion increased to 42% in 2002, then dropped to 22% by 2005.</li> </ul>
College enrolment	<ul style="list-style-type: none"> <li>• The proportion of students enrolled increased until 2003, and then decreased thereafter.</li> <li>• The highest proportion of students enrolled: 26% of respondents in 2003.</li> </ul>	<ul style="list-style-type: none"> <li>• 8% of respondents were enrolled in college programs in 2000. This proportion increased through to 2002, then fell to 7% in 2005.</li> </ul>
University enrolment	<ul style="list-style-type: none"> <li>• The proportion of students enrolled increased through 2005.</li> <li>• The highest proportion of enrolled students: 36% of respondents in 2005.</li> </ul>	<ul style="list-style-type: none"> <li>• 22% of respondents were enrolled in university studies in 2000. This proportion increased until 2002, then fell to 15% in 2005.</li> </ul>

training program. Regardless of province, college training is largely focused on technical and vocational training. In colleges that provide university-level education and in CEGEPs that offer pre-university programs, students who have completed their studies may proceed directly to university, unless they have taken a “gap” year off or entered the work force.

In the case of Cohort B, postsecondary enrolment rises to 45% in 2002. Enrolment rates fall thereafter, as students complete their college and university studies. College enrolment is relatively low (between 7% and 13%, depending on the year). This is due to the fact that respondents were aged 18–21 in October 2000; a significant number of respondents, particularly those aged 20–21, had most probably completed their college education and had already entered university or joined the work force. This is certainly the case in Quebec, where students wishing to enter university formally complete their college studies at ages 19–20. Similar situations also exist in other provinces. The nature of the cohort sample is thus responsible for this low percentage. University enrolments follow the same trend, rising until 2002 and falling thereafter to 15% of respondents by 2005.

Pathway analysis yields a better understanding of the different routes taken by young people. In Cohort A, the rate of early exits from the education system is quite low. Overall, linear pathways are common, with eight out of every ten respondents falling into this category. Half of these showed unbroken educational pathways until 2005, while the other half exited the education system after a period of continuous study. Respondents who returned to studies after one or more interruptions were a minority, but a significant one nonetheless (20%). In the case of Cohort B, the pathways are quite different. Three out of ten respondents were never enrolled in an academic program at any point during the observation period, while one in ten remained enrolled during all six years of study. One-third of respondents were enrolled for a continuous period before exiting the system, while a little more than one-quarter had returned to studies at least once.

As regards pathway continuity, seven out of ten respondents in Cohort A enrolled in a postsecondary program. Approximately 60% passed from one level of education to another without discontinuity, while 10% interrupted their studies along the way. In the case of Cohort B, seven out of ten respondents

**Insert 2 — Summary of the Main Empirical Results of the Pathway Analysis**

	<b>Cohort A – aged 15 in 2000</b>	<b>Cohort B – aged 18-20 in 2000</b>
By continuity	<ul style="list-style-type: none"> <li>• 40% of respondents were students throughout the observation period.</li> <li>• 39% left the education system after a continuous period of study.</li> <li>• 21% returned to studies one or more times.</li> <li>• 1% left the education system in January 2000.</li> </ul>	<ul style="list-style-type: none"> <li>• 30% of respondents never enrolled in an academic program at any point during the observation period.</li> <li>• 9% were continually enrolled throughout the observation period.</li> <li>• 36% left the education system after a continuous period of study.</li> <li>• 25% returned to studies one or more times between 2000 and 2005.</li> </ul>
Transition to PSE	<ul style="list-style-type: none"> <li>• 70% of respondents went on to PSE.</li> <li>• 50% were still enrolled in a postsecondary program in 2005.</li> <li>• 12% enrolled in PSE after an interruption.</li> <li>• 20% left the education system after a period of postsecondary study.</li> <li>• 24% left the education system after high school.</li> <li>• 4% returned to a lower level of education.</li> <li>• 2% experienced other situations.</li> </ul>	<ul style="list-style-type: none"> <li>• 13% of respondents left the education system without any postsecondary education.</li> <li>• 57% were enrolled in PSE.</li> <li>• 11% returned to PSE.</li> <li>• 30% left PSE after a period of study.</li> <li>• 16% were continually enrolled throughout the observation period.</li> </ul>

enrolled in postsecondary programs, and almost half had left them by 2005. Lastly, 16% of respondents reported uninterrupted educational pathways during the full six-year observation period.

The majority of respondents reported continuous educational pathways. Few students (fewer than one in twenty across Canada) returned to previous levels of study after enrolling in postsecondary programs. The majority of these were students from Quebec who enrolled in vocational training programs, since such programs are more frequently attended by young adults (aged 20 and up) than by high school graduates following linear pathways (MELS, 2004).

In the other provinces, most of those returning to lower levels of study had left university to enrol in a college-level program.

The differences between these two sample groups have one additional result. While Cohort A allowed us to study transitions and access to postsecondary education as well as persistence in enrolment, this was not the case with Cohort B. Conversely, the latter group permitted us to study interruptions and returns to study. Furthermore, it is worth asking what type of individuals (in sociological terms) return to studies after a period of interruption. This question will be addressed in a separate research note.



## 4. “Multi-Provincial” Models of Education Systems?

Comparing student pathways in Canada raises the issue of similarity and difference between provincial education systems. In Canada, education falls under provincial jurisdiction; over time, each province has shaped and modified its own system. As a result, Canada has 10 education systems, without counting the three territories (Yukon, NWT and Nunavut).<sup>13</sup> Each system works as a kind of sorting station. At various points in the educational progression, students and their parents come up against choices: field of study, institution, program (vocational or general — i.e. leading to a higher level), and so on. In this sense, each province formalizes its own typical paths. When they leave high school, students are faced with a training “offer” consisting of programs (technical/vocational, pre-university, university) on the one hand, and institutions (community colleges, CEGEPs, universities, university colleges, institutes of technology) on the other. These two aspects, when combined, characterize the education system of a given province. In our analysis, we place ourselves in the shoes of a newly graduated high school student in order to explore the range of educational possibilities under each provincial system — the ultimate goal being to discern each system’s “prescribed” paths.

### 4.1 The Three Education System Models

Quebec’s education system is different from those in the rest of Canada, notably due to the CEGEP system, a province-wide network of colleges offering general and vocational education. Some believe that this difference effectively makes for two major education systems in Canada. In the first — and most widespread — system, the transition from high school

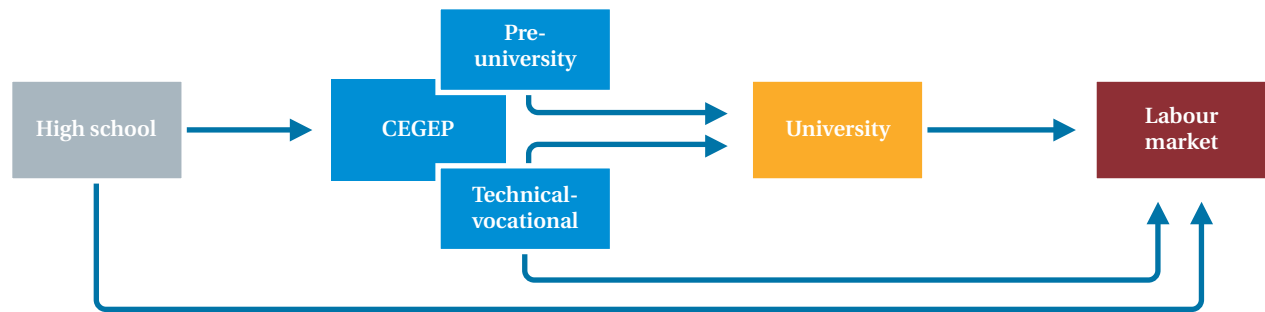
to postsecondary education comes after 12 years of schooling. At this point, students may enter a community college (largely devoted to technical or vocational training) or a university (generally offering four-year undergraduate programs). In the second system, that of Quebec, students enter postsecondary studies through the CEGEP system after just 11 years of schooling, and have the choice of technical or pre-university training. After obtaining a Diploma of College Studies (DEC), students in the two-year pre-university stream may apply to university (Quebec’s undergraduate programs generally last three years<sup>14</sup>). Students in the three-year technical training stream are ready to enter the work force immediately upon graduation. There is one further distinction: in Quebec, entry-level vocational training is provided by high schools and not by community colleges or workplace apprenticeships, as is the case in the other provinces.

The distinction between these two education systems seems to be universally acknowledged. However, a more in-depth look at the issue shows that the differences in Canada’s education systems are not solely limited to the existence of the CEGEP system — findings that are underscored in Dennisson and Gallagher’s research on postsecondary studies (1986, 1995).

Comparison yields a first observation: high school graduation does not occur at the same point in each province. Until only recently, in Ontario, primary and secondary schooling encompassed a 13-year span. A reform to secondary education enacted at the turn of the millennium reduced Ontario’s curriculum by one year. As for the rest of Canada, primary and secondary schooling lasts 11 years in Quebec, 12 in the other provinces.

13. In this research paper, only the 10 Canadian provinces are part of the study, since the territories were not part of the YITS sample.

14. In Quebec, undergraduate programs generally require 90 credits, though four-year programs requiring 120 credits also exist.

**Figure 3 — The Progressive-Choice Education System Model (Quebec)**

High school graduates wishing to pursue postsecondary studies face an institutional landscape that differs from province to province. In Quebec, as mentioned previously, students enter the CEGEP system and choose between technical or general (pre-university) training.<sup>15</sup> CEGEP programs are defined by their level of college education on the basis of a *régime pédagogique* [provincial curriculum] set by the *Ministère de l'Éducation, du Loisir et du Sport* (MELS). This situation creates a measure of independence for the CEGEPs, though it should be pointed out that university and labour market needs are taken into account when planning programs. Once their studies have been completed and capped by the college diploma (DEC), students may decide to enter the labour force or proceed to university. We call this type of postsecondary system a “progressive choice” model (figure 3).

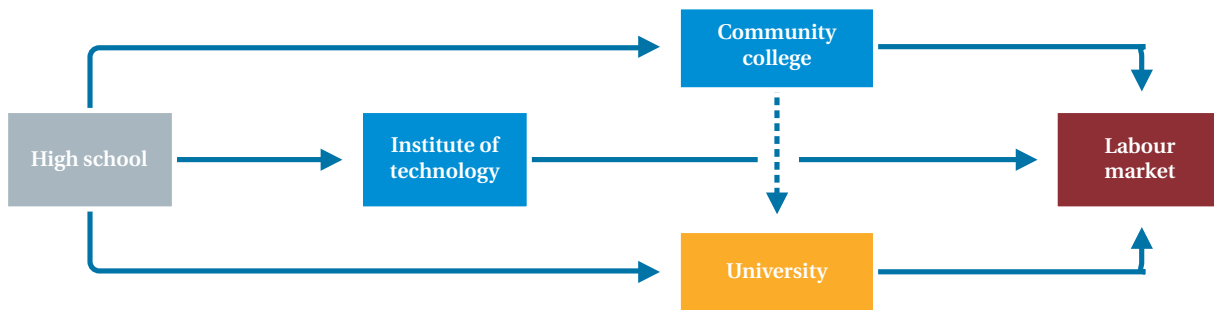
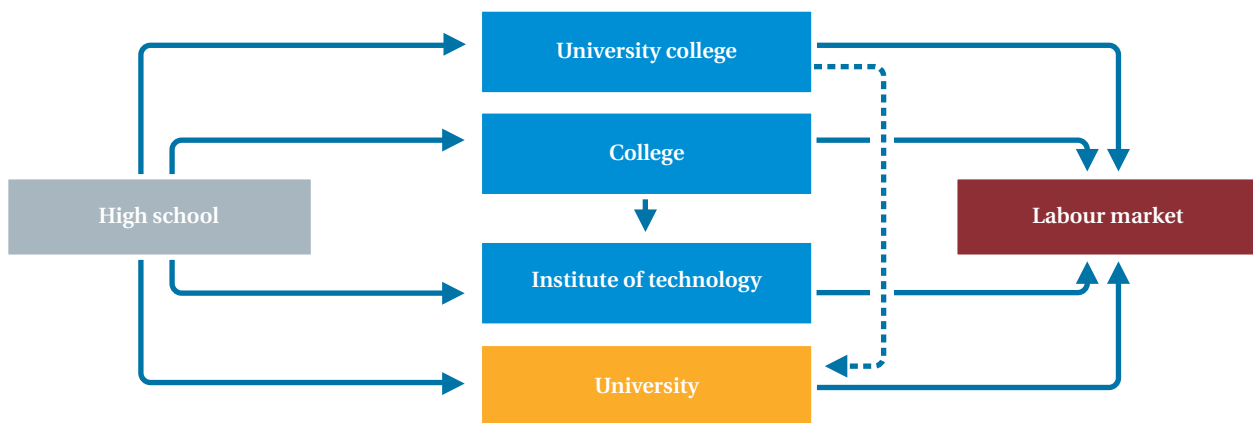
Dennisson and Gallagher (1995) describe a second model, current in both Ontario and Prince Edward Island, in which the college structure works to support the universities. Ontario’s colleges of applied arts and technology are presented as an alternative to university; similarly, Prince Edward Island’s lone college is offered as a postsecondary option for young people ineligible for university admission. In both provinces, these new types of colleges also serve as adult education centres where adult learners can pursue professional development, career retraining or non-work-related personal goals.

Dennisson and Gallagher (1995) also identify a third form of college education. Borrowing from the

Californian model, Alberta and British Columbia have integrated college and university curricula by making it possible in some cases for college credits to be transferred to a university program. This system aims to promote university access, previously limited by the geographical dispersion of the population in both provinces. Colleges in Alberta and British Columbia offer a diverse range of options that include technical and vocational training, university transfer programs and distance education for learners in remote regions. The result is a vast array of postsecondary options. Students may choose to enter university immediately, experience their first year of undergraduate studies in a college setting before going on to university, or opt for vocational or technical training in a college or institute. Postsecondary institutes of technology and specialized schools further expand the field of possibilities. Here, too, the community colleges strive to make adult education more accessible.

Saskatchewan offers a variation on the above model. Implemented to allow a predominantly rural population to benefit from postsecondary education, Saskatchewan’s colleges present numerous training possibilities, though it should be mentioned that the focus is on technical-vocational training. To decentralize the education offer, Saskatchewan adopted a ‘multi-campus’ approach. Accordingly, postsecondary training in rural regions is shared between community colleges and other institutions. More recent findings show that some colleges also offer university training, bringing this system closer to those of Alberta and British Columbia.

15. It should be noted that students in the technical stream may also go on to university studies. The *École de technologie supérieure* (ETS) is an engineering school that recruits students from among technical program graduates. There are an increasing number of bridges between technical and university programs in related fields. Certain programs leading to a technical diploma also make provisions for a transition to university, with the possibility of obtaining an undergraduate degree in two years (DEC/BAC). This is not exclusive to Quebec; integrated technical/university programs exist elsewhere in Canada as well.

**Figure 4 — The Exclusive-Choice Education System Model (Ontario, PEI, Nova Scotia, New Brunswick, Newfoundland)****Figure 5 — The Multiple-Choice Education System Model (Manitoba, Saskatchewan, Alberta, British Columbia)**

Colleges in Manitoba, New Brunswick, the Yukon, the Northwest Territories and Newfoundland/Labrador constitute a final model. In these provinces and territories, the colleges' missions do not include any mechanism for transfer to university. According to Dennisson and Gallagher, this model emphasizes short-term postsecondary programs with a clear labour-market focus. As in the rest of Canada, adult education is offered by the community colleges. There is one exception: some Manitoban colleges now offer university training.

This overview of college education in Canada<sup>16</sup> underscores three education system models. We have already identified that of Quebec as a 'progressive-choice' model. The second model, which we call "exclusive-choice," is found in Nova Scotia, Newfoundland, Ontario, Prince Edward Island and New Brunswick (Figure 4). This system is characterized by the offer

of two mutually exclusive types of postsecondary education to high school graduates: university or college (including community colleges and institutes of technology).

The third model, which we call the "multiple-choice" model, applies to the systems used in British Columbia, Alberta, Saskatchewan and Manitoba (Figure 5). The multiple-choice model is characterized by a variety of postsecondary institutions (university colleges, community colleges, institutions, universities) and training (technical/vocational programs, pre-university and university programs, continuing education, adult education). This model also strives to make university training geographically accessible by dispensing it through numerous establishments (university colleges, community colleges, institutions, universities).

16. For further information on each province's education system, see Appendix 2.

## 4.2 Comparing Canada's Education System Models

### 4.2.1 Cohort A

Do the pathways taken by youth aged 15 and over differ based on the Canadian education system model in which they are enrolled? Table 11 indicates a substantial difference between the progressive-choice model (which showed a lower proportion of students still enrolled in 2001) and the others. This is partially due to the fact that high school finishes one year earlier in Quebec, and that key transition points within an educational system are marked by the departure of a certain number of students from that system. Similar situations can be observed in the other two models one year later. If, by 2002, the progressive and exclusive-choice models show comparable results, this is not the case in the multiple-choice model, where 55% of students in the cohort were still at school. It must be noted, too, that by 2005, the gap had widened: 60% of students in provinces with the exclusive-choice model were still at school; this number fell to 54% in the progressive-choice model and dropped to 48% in the multiple-choice model.

This situation appears somewhat paradoxical. The provinces that implemented the multiple-choice model had striven to improve access to postsecondary education by multiplying entry points. However, these provinces showed the highest dropout rate. The paradox can be resolved when other social and economic factors are taken into consideration. The multiple-choice system was implemented in the Western provinces, which experienced strong economic growth

in the early years of the millennium (one only need think of the tar sands). Such situations tend to incite young people to join the work force directly following high school, thus diverting them from postsecondary studies.

The overall pattern of student attendance in the multiple-choice model differs from the others by the drastic degree of decline in participation between 2001 and 2002 — a decrease that is markedly more gradual in the other two models.

The transition from secondary to postsecondary studies does not occur at the same point in all three models (Table 12). Its earliest occurrence is in the progressive-choice model, where we note the double impact of the shorter duration of high school and the existence of the CEGEP system: 45% of cohort respondents had entered postsecondary studies in 2001, compared to 1% in the other models, where the transition occurs at a later date. In the exclusive-choice model, students enter postsecondary studies in the following year. This is particularly evident after 2003, since until that time in Ontario, the combined duration of primary and secondary studies was 13 years (and not 12 years like in the other Canadian provinces).

The transition to college reflects the particularities of Canada's education systems. This is illustrated by the significant differences between the three education system models shown in Table 13. The proportion of college students, whether in technical training or pre-university programs, was 56% in the progressive-choice model. The fact that the transition takes place before either of the other two models reflects another aspect of Quebec's education system. The decreased participation noted in 2003 and especially in 2004 is due both to university enrolment

**Table 11 — Respondents Enrolled in an Academic Program Based on Education System Model, YITS Cohort A (%)**

Education system model	2000 aged 15–16	2001 aged 16–17	2002 aged 17–18	2003 aged 18–19	2004 aged 19–20	2005 aged 20–21
Exclusive-choice	99	97	79	70	66	60
Progressive-choice	98	88	76	68	62	54
Multiple-choice	99	96	55	53	52	48
Total	99	95	71	64	61	54



**Table 12 — Respondents Enrolled in Postsecondary Studies Based on Education System Model, YITS Cohort A (%)**

Education system model	2000 aged 15–16	2001 aged 16–17	2002 aged 17–18	2003 aged 18–19	2004 aged 19–20	2005 aged 20–21
Exclusive-choice	0	1	23	65	61	59
Progressive-choice	1	45	57	59	52	46
Multiple-choice	0	1	38	50	47	46
Total	0	11	36	59	54	51

**Table 13 — Respondents Enrolled in College Studies Based on Education System Model, YITS Cohort A (%)**

Education system model	2000 aged 15–16	2001 aged 16–17	2002 aged 17–18	2003 aged 18–19	2004 aged 19–20	2005 aged 20–21
Exclusive-choice	0	1	11	22	19	16
Progressive-choice	1	45	56	46	28	17
Multiple-choice	0	0	10	17	15	14
Total	0	11	21	27	21	16

and to the labour force entry of technical-stream students. In each of the other models, the proportion of respondents attending college is notably lower, as these are provinces in which students have the opportunity to enter university directly. It should also be pointed out that, in these provinces, college education largely focuses on technical/vocational training.

University enrolment likewise broadly reflects the educational structure (Table 14). Respondents in the progressive-choice model entered university in 2003, a full year after their peers in the other two models, and in lower proportions (29% versus 43% and 33%). Respondents in the exclusive-choice model began entering university in 2002. Enrolment peaked in 2003, and remained at a more or less similar level until 2005. The former existence of Grade 13 in Ontario is partly responsible for the two-year transition. This model yields the highest number of young people enrolled in university (43%), a situation that may be linked to the educational offer of certain provinces<sup>17</sup> and relative importance of college and university instruction in the educational structure. In the multiple-choice model, the transition to university

occurs more rapidly for a greater proportion of respondents than in the exclusive-choice model, but never reaches the same level of enrolment (33%).

#### 4.2.2 Cohort B

As indicated above, Cohort B differed from Cohort A in that many of its respondents were not enrolled in an academic program during the first cycle of the YITS; furthermore, those who were enrolled were already in postsecondary studies. Below is an overview of our observations:

- Participation in education decreased regularly from 2000 to 2005, reaching 22% among cohort respondents (Table 15). Differences between the three education system models were minor. At the start of the period, the proportion of students among the respondents was lowest in the multiple-choice model (47% compared to 58% and 59%); however, this difference decreased over the six-year observation period.
- Enrolment in postsecondary studies followed the same pattern in all three models, although the exclusive-choice model had the highest level

17. The number of available spots at college and university should be compared in provinces with a low population density (e.g. New Brunswick and Nova Scotia).

**Table 14 — Respondents Enrolled in University Studies Based on Education System Model, YITS Cohort A (%)**

Education system model	2000 aged 18–21	2001 aged 19–22	2002 aged 20–23	2003 aged 21–24	2004 aged 22–25	2005 aged 23–26
Exclusive-choice	0	0	12	43	42	43
Progressive-choice	0	0	1	13	24	29
Multiple-choice	0	1	27	33	32	33
Total	0	1	15	32	34	36

**Table 15 — Respondents Enrolled in an Academic Program Based on Education System Model, YITS Cohort B (%)**

Education system model	2000 aged 18–21	2001 aged 19–22	2002 aged 20–23	2003 aged 21–24	2004 aged 22–25	2005 aged 23–26
Exclusive-choice	59	55	49	38	29	21
Progressive-choice	58	51	43	36	31	25
Multiple-choice	47	44	40	34	27	21
Total	55	50	45	36	29	22

**Table 16 — Respondents Enrolled in Postsecondary Studies Based on Education System Model, YITS Cohort B (%)**

Education system model	2000 aged 18–21	2001 aged 19–22	2002 aged 20–23	2003 aged 21–24	2004 aged 22–25	2005 aged 23–26
Exclusive-choice	36	47	47	38	27	21
Progressive-choice	27	40	41	35	26	22
Multiple-choice	25	35	36	34	25	21
Total	30	41	42	36	26	21

of enrolment midway through the observation period (Table 16).

- College enrolment was relatively low in all three models (Table 17). The point at which the number of students decreased varied based on the model; this decrease was noted earliest in the progressive-choice model.
- University enrolment was markedly higher than that of college in all three models (Table 18). The percentage of students enrolled in a university varied at the start of the period, but the differences between models diminished over time. The rate of university enrolment was slightly higher in the progressive-choice model by 2005.

## 4.3 Student Pathways in All Three Models

### 4.3.1 Pathways in Cohort A

Examining the differences between the three education system models shows continuous pathways to be proportionally higher in the exclusive- and progressive-choice models, where they apply to 46% and 41% of respondents respectively (Table 19). 2005 enrolment following one or more interruptions to study is most common in the multiple-choice model (17%). The percentage of youth who drop out of education for good is lowest in the exclusive-choice model (35% compared

**Table 17 — Respondents Enrolled in College Studies Based on Education System Model, YITS Cohort B (%)**

Education system model	2000 aged 15–16	2001 aged 16–17	2002 aged 17–18	2003 aged 18–19	2004 aged 19–20	2005 aged 20–21
Exclusive-choice	8	14	16	12	9	8
Progressive-choice	12	16	14	9	7	5
Multiple-choice	6	10	12	12	9	8
Total	8	12	13	11	8	7

**Table 18 — Respondents Enrolled in University Studies Based on Education System Model, YITS Cohort B (%)**

Education system model	2000 aged 15–16	2001 aged 16–17	2002 aged 17–18	2003 aged 18–19	2004 aged 19–20	2005 aged 20–21
Exclusive-choice	28	33	31	26	18	13
Progressive-choice	15	24	27	26	20	17
Multiple-choice	20	25	24	24	16	13
Total	22	29	29	25	18	15

to 40% and 44%). In other respects, differences in enrolment/exit alternation (students who leave and return to the education system more than once) are negligible between all three models.

Linear pathways are somewhat less common in the multiple-choice model (31% + 44% = 75%), though they constitute the majority of pathways overall. The multiple-choice model showed the lowest rate of continuous enrolment over the six-year observation period (31% compared to 40% in Canada as a whole) as well as the highest proportion of students who resume their studies (25% compared to 21% in Canada as a whole) or leave for good (44% compared to 39% in Canada as a whole). A final distinction in the three models is the percentage of pathways with interruptions and returns to studies, which varies between 19% and 25%.

Table 20 indicates that lower numbers of students in the multiple- (63%, or 29 + 19 + 15) or the progressive- (63%, or 37 + 19 + 7) go on to postsecondary studies than is the case in the exclusive-choice (75%, or 44 + 20 + 11) model. This difference can be partially attributed to the number of students who enter postsecondary studies directly after high school with no interruptions. The percentage of students who enter postsecondary studies and leave only at

the end of the observation period varies only slightly between models (20%, 19%, 19%).

The particular nature of the progressive-choice model should be underscored, since it shows the highest proportion of high school-college, high school-college-university and high school-college-exit transitions. This is due to the status of the CEGEPs in the formal paths offered by the postsecondary education system.

The multiple-choice model resulted in the highest percentage of leavers after high school (32% compared to 23% and 20% in the other models). In the progressive-choice model, the percentage of students who resume studies at a lower level of education was twice as high as in the other models (6% compared to 3% and 4%), a situation largely due to the fact that vocational training in Quebec is provided through the high schools. The progressive-choice model also shows a higher percentage of students in situations other than those described previously (7% compared to 2%).

#### 4.3.2 Pathways in Cohort B

Table 21 presents a comparison of the three education system models. The percentages of continuers (students who persist) are similar across all three



**Table 20 — Postsecondary Transitions of Respondents in Canada, YITS Cohort A (%)**

		Exclusive choice	Progressive choice	Multiple choice	Canada				
Direct transition to PSE	Secondary–college	7	44	11	37	3	29	7	38
	Secondary–university	35		1		23		24	
	Secondary–college–university	2		25		3		8	
Direct transition to PSE with exit	Secondary–college–exit	15	20	18	19	12	19	15	20
	Secondary–university–exit	5		1		7		5	
Transition to PSE after interruption	Secondary–interruption–college	7	11	5	7	8	15	7	12
	Secondary–interruption–university	4		2		7		5	
No transition to PSE	Secondary–exit without PSE	20	20	23	23	32	32	24	24
Other	Return to a lower level of education	3	3	6	6	4	4	4	4
	Other situations	2	2	7	7	2	2	2	2
Total		100	100	100	100	100	100	100	100

**Table 21 — Respondent Pathways from 2000 to 2005 Based on Education System Model, YITS Cohort B (%)**

		Exclusive-choice	Progressive-choice	Multiple-choice	Canada				
Continuers 2005	Continuous enrolment, 2000–2005	9	21	11	25	8	21	9	22
	Enrolment in 2005 with interruption(s)	12		14		13		13	
Leavers 2005	Continuous enrolment with exit	40	52	36	47	31	44	35	48
	Enrolment/non-enrolment alternation with exit, 2005	12		11		13		13	
Never in PSE		27	27	29	29	35	35	30	30
Total		100	100	100	100	100	100	100	100

noted. However, before ruling on each model's relevance, we must determine whether the differences *within* each model are less significant than the differences *between* them. Since the progressive-choice model is only found in one province, we will leave it aside for the moment. The exclusive-choice model is found in five provinces and the multiple-choice, in four — hence the interest of a comparative analysis for each of these two models.

The following findings apply to Cohort A (Figures 6 and 7):

- Enrolment rates are similar among the provinces that feature the exclusive- and multiple-choice models. Inter-provincial differences between both models are equally minor. The multiple-choice model shows earlier exits from the education system.

**Table 22 — Postsecondary Transitions of Respondents in Canada, YITS Cohort B (%)**

		Exclusive-choice		Progressive-choice		Multiple-choice		Canada	
Return to studies	High school	0	5	1	6	1	8	1	6
	College	3		2		4		3	
	University	2		3		3		2	
Return to studies and exit	Non-enrolment–high school–exit	1	8	3	6	2	10	2	8
	Non-enrolment–college–exit	6		2		7		5	
	Non-enrolment–university–exit	1		1		1		1	
Exit after studies	High school–exit	9	43	11	41	9	33	10	40
	College–exit	7		8		3		6	
	University–exit	18		11		14		15	
	Other pathways with exit	9		11		7		9	
Continuous educational pathways	High school–college	2	16	2	18	2	14	2	16
	High school–university	3		8		4		5	
	Other continuous educational pathways	11		8		8		9	
Never in PSE			27		29		35		30
Total		100	100	100	100	100	100	100	100

- College enrolments are equal across the provinces, education system model notwithstanding, with the exception of Ontario.
  - Regarding university studies, inter-provincial differences within a given education system model are minimal. The same applies between models. The Western provinces have a somewhat lower university enrolment rate than do provinces in the exclusive-choice model, although this is even more marked in the cases of Prince Edward Island and Nova Scotia.
  - Continuous pathways (Figure 7) are proportionally less common in the multiple-choice model. Pathways with interruptions are equally common both within each model and across models. Exits are more numerous in the multiple-choice model; however, New Brunswick bears strong similarities to this model while British Columbia is more like the exclusive-choice model.
- Regarding Cohort B, we observed that (Figures 6 and 8):
- Enrolment followed the same curve between provinces in any given model as between models.
  - Only Ontario showed any difference with regard to college enrolment.
  - University enrolment curves are similar within models, and somewhat different between models. Enrolment is somewhat higher than in the Prairies, while the rate in British Columbia is similar to that of Ontario.
  - Regarding pathways there is no difference either between or within models, with the exception of Prince Edward Island, which stands out for its higher proportion of leavers.

**Figure 6 — Inter-Provincial Comparisons Based on Education System Model**

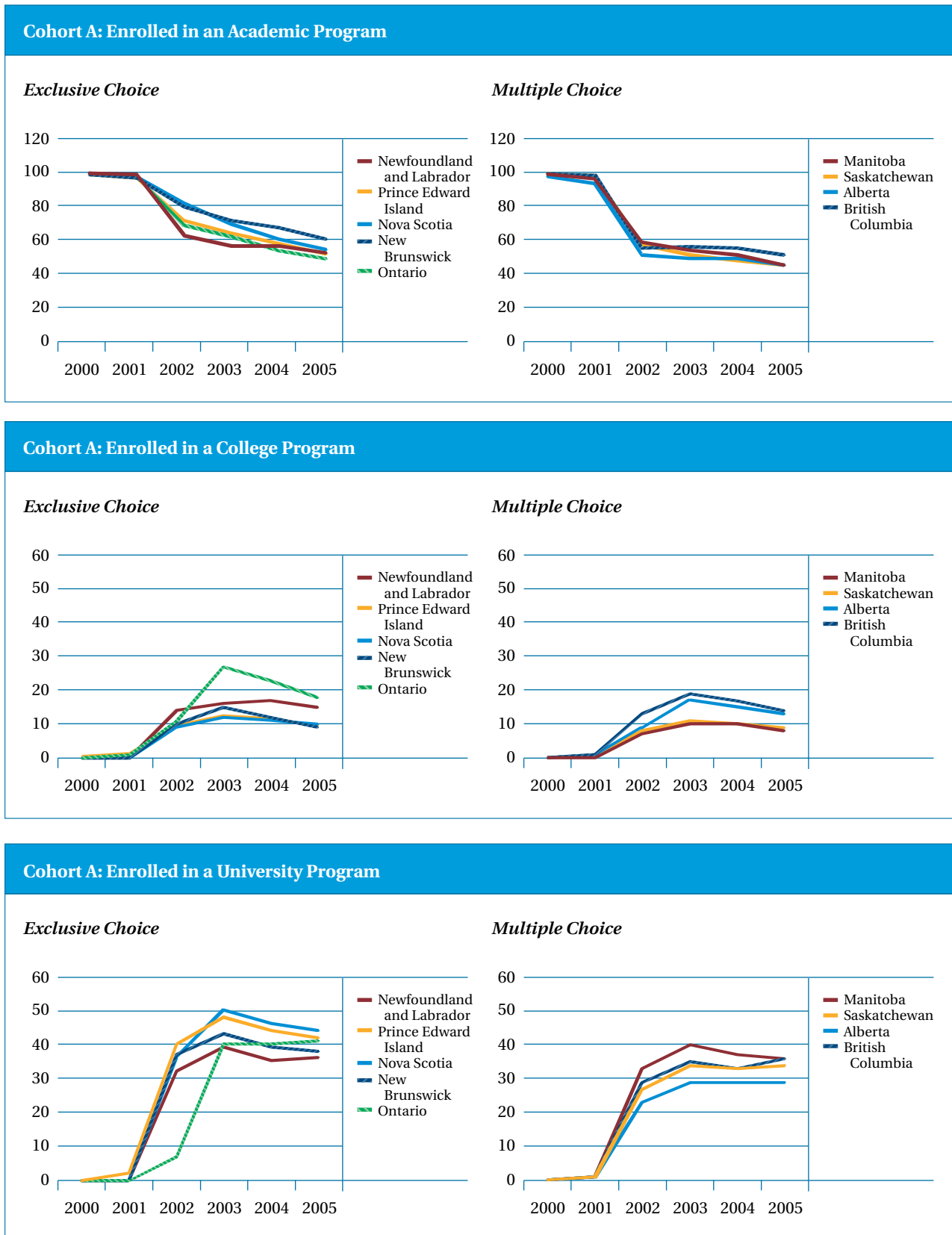
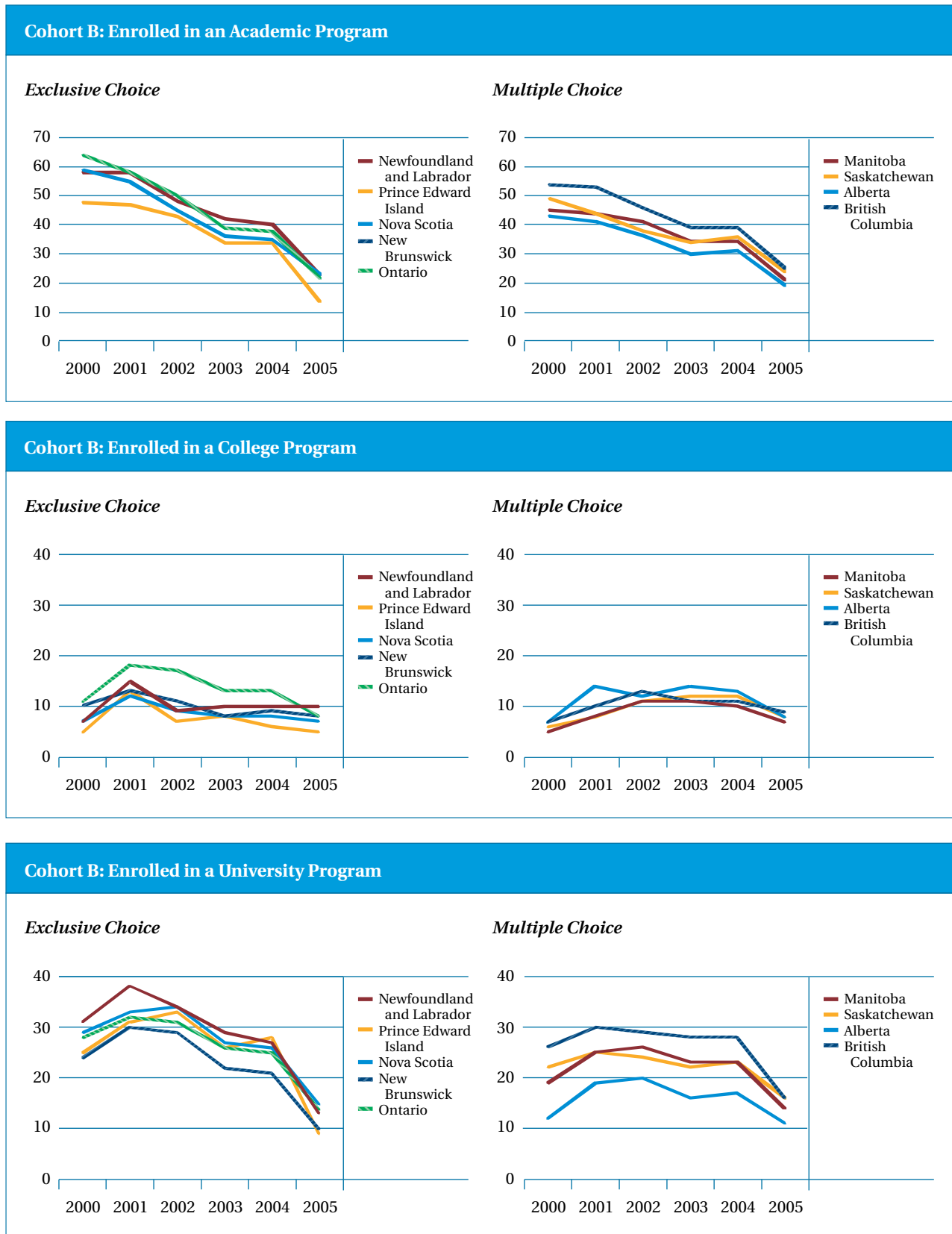


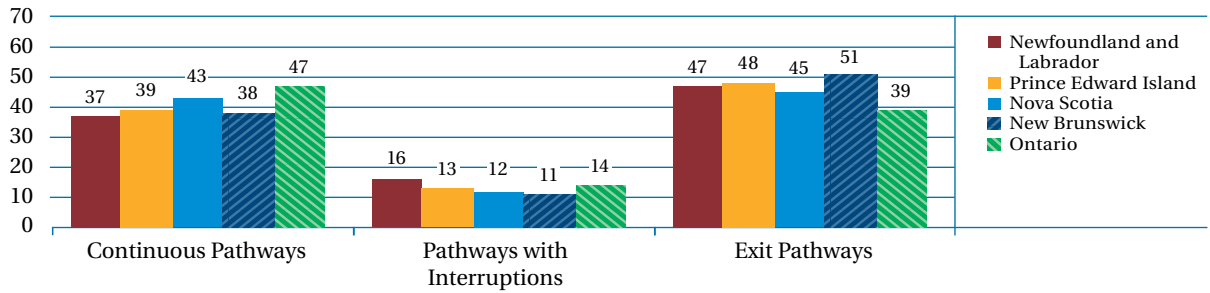
Figure 6 — Inter-Provincial Comparisons Based on Education System Model (continued)



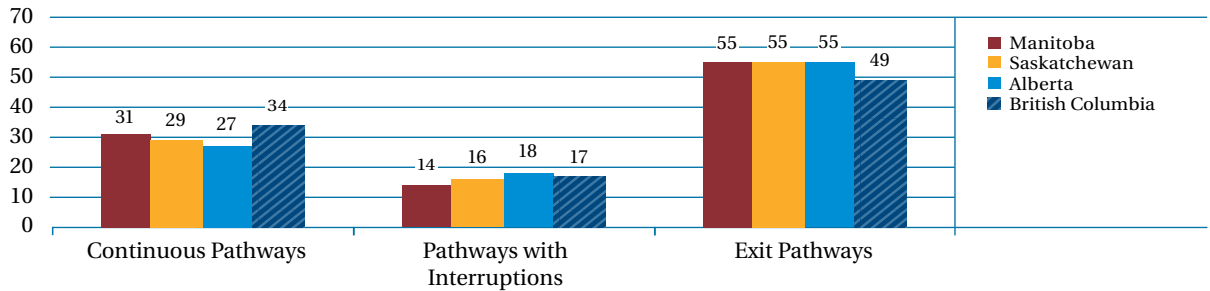


**Figure 7 — Inter-Provincial Pathway Differences within a Given Education System Model, YITS Cohort A**

*Exclusive-choice Model*

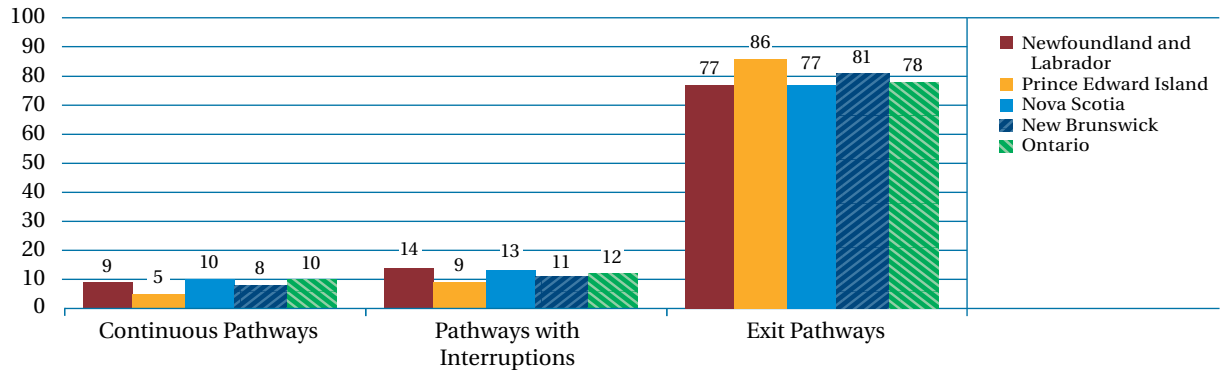


*Multiple-choice Model*

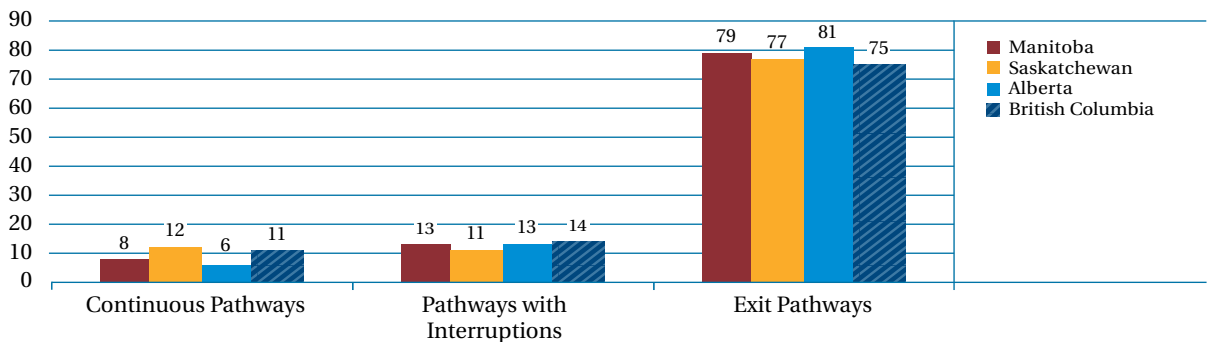


**Figure 8 — Inter-Provincial Pathway Differences within a Given Education System Model, YITS Cohort B**

*Exclusive-choice Model*



*Multiple-choice Model*



## 4.5 Summary (of 4.3 and 4.4)

We sought to validate the existence of “multi-provincial” models of education systems. After examining the primary pathway characteristics of 10 provincial systems, we identified three main models. Following this, we compared student trajectories through the education system and at different educational levels, and examined the relative importance of different pathways. In a third stage, we verified whether overall differences between our three education system models were greater than the variations within each one.

A comparison of the three models indicates that the differences between them were not systematic, as, in fact, they also share many similarities (Insert 3). Differences are largely due to each model’s structure. As a result, transitions to postsecondary education can be partly understood through the organization of the education system, e.g. the presence of CEGEP as an intermediate step between high school and university and the variable degrees of secondary-level schooling in different provinces. The relative importance of college and university studies may be contingent on the kinds of college training available, but only a more in-depth analysis could properly explore this question. All the same, a number of observed differences between the models — for

instance, the high discontinuity rate in the multiple-choice model — may be due to external factors like the provincial economic context (e.g. the tar sands and related industries).

For an analysis of different educational system models to be useful, each model must have a level of internal homogeneity; this was the rationale for our inter-provincial comparison within each model or type. Our analysis leads to the following conclusion: inter-provincial differences between the three education system models are often as marked as the differences within each model. Conversely, similarities among the models are equally strong. There is no ‘absolute.’ Newfoundland, for example, is closer to the multiple-choice provinces than it is to Nova Scotia.

In a broader sense, the comparison suggests that two dimensions distinguish the provinces. If we retain the characteristics of each model, and more particularly the importance of college education, then Ontario and Quebec emerge as different from the other provinces because of the importance of college education within their provincial educational systems. Conversely, external factors such as economic growth can also serve to shape educational participation. The fact that Alberta shows the country’s lowest level of university participation for both cohorts does not necessarily reflect the degree of development of Alberta’s university system.

# Conclusion

In this research paper — the fourth in a series focusing on transitions in Canadian postsecondary education — we strove to identify the relative importance of different educational pathways, which vary significantly between education systems. These differences stem in part from the systems themselves, which fall under provincial jurisdictions; and in part from the individual “accommodations” made for each institutionally sanctioned path within the system in which it is inscribed. Our analysis focused on gaining a better understanding of these differences from a quantitative viewpoint and on describing the main trends that characterize them.

The methodological challenge of identifying the pathways of two YITS cohorts was addressed through a two-part empirical analysis. We first identified the annual distribution of educational situations, then plotted the educational pathways by sequencing these various situations.

Using data from the first four YITS cycles, our investigation covered the years 2000 to 2005. We examined the pathways of youth initially aged 15<sup>18</sup> in Cohort A and those initially aged 18-21 in Cohort B. In terms of institutionally prescribed pathways, the observation of Cohort A began at an age when young people are in high school and are still subject to compulsory school attendance in all provincial systems. This cohort was tracked until its respondents would normally have either entered university or joined the labour market after more or less lengthy periods of study. The observation of Cohort B, in turn, began with the transition to postsecondary education in all systems. Respondents were tracked over six years, regardless of their respective routes. The initial age difference accounts for the differences in pathway distribution in the two cohorts.

Overall across Canada during the observation period, almost one-third of the young people in Cohort A were continuously enrolled in an academic program; one in five had had interrupted their studies;

and nearly half had exited the education system. In Cohort B, almost four out of five young people exited the system during the same period. However, these data do not distinguish between graduates and non-graduates. A significant proportion of education system departures were likely as not a planned part of the student’s academic track (graduation and labour market entry).

Our research also had a second objective: to test our hypothesis as to the existence of different provincial education system models by examining their similarities and differences. That there is no single pan-Canadian school system is understood; but are there truly only 10 provincial systems (not including the three territories and indigenous communities)? We first identified three different education system models by examining the transition patterns and proposed pathways in each provincial system. We then compared student flow and pathways in all three models. Lastly, we compared the provinces grouped under each model to determine their degrees of similarity.

This exercise did not result in a conclusive identification of three truly distinct models of student flows and pathways. Inter-provincial disparities within a given model were often as great as those between models. Some disparities can be explained by differences in educational structures. Since secondary schooling is of shorter duration in Quebec, Quebec students enter the college system more rapidly than in other provinces, whereas in Ontario they are slower to enter the system. Other features appear to fluctuate with economic growth or various external factors; however, these are beyond the scope of our investigation.

We can draw two conclusions from this exercise. First, in terms of methodology, a deeper knowledge of each model would be required to fully grasp the logical structure of each system. In this regard, attention would need to be paid to the institutional

18. Our analyses were based on the situation of young people in October 2000 to 2005. All Cohort A respondents were aged 15 on January 1, 2000, although a certain number had turned 16 by October of that year. Similarly, while some respondents in Cohort B were aged 20 in October 2000, others had already reached the age of 21.

interdependencies in and across provinces. For example, colleges in several provinces have begun offering university transfer programs to facilitate access to university. Such “borrowings” result in more homogeneous systems. We would also need to examine the various external factors liable to influence postsecondary participation and the nature of student pathways.

Secondly, the organization of the educational system is not necessarily as important as might

have been thought in terms of its effects both on pathways and on access to postsecondary education. The homogenization of systems reduces differences, and in any case, students do not necessarily follow institutionally sanctioned paths. Interruptions and returns to studies, whatever their underlying causes, are ways in which students appropriate possible pathways. This underscores the influence of both contextual and individual factors on patterns of student pathways.

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## Appendix I

# Variables Used to Operationalize Educational Pathways

Variable Name	Categories
<b>LVPRD</b> (derived variable): Postsecondary program level	<ul style="list-style-type: none"> <li>• Attestation of Vocational Specialization (AVS or ASP)</li> <li>• Private business school or training institute diploma or certificate</li> <li>• Registered Apprenticeship program</li> <li>• College or CEGEP program</li> <li>• University transfer program at a college or CEGEP (for credits, university transfer diploma or Associate's Degree)</li> <li>• College post-diploma or graduate level program (prerequisite: college diploma or higher)</li> <li>• University certificate or diploma below bachelor's (undergraduate level)</li> <li>• Bachelor's degree</li> <li>• First professional degree</li> <li>• Graduate-level diploma or certificate <i>above</i> Bachelor's, <i>below</i> Master's</li> <li>• Master's degree</li> <li>• PhD degree</li> <li>• Diploma, certificate or license from a professional association (e.g. accounting, banking, insurance)</li> <li>• Other level of postsecondary training</li> </ul>
<b>CLGPRD</b> (derived variable): Status of postsecondary studies in this program as of December 2003	<ol style="list-style-type: none"> <li>1 Program graduate</li> <li>2 Continuer</li> <li>3 Leaver</li> </ol>
<b>DSPRMD</b> (derived variable): Date (month) in which the respondent began this postsecondary program prior to January 2004	Month of program commencement
<b>DSPRYD</b> (derived variable): Date (year) in which the respondent began this postsecondary program before January 2004	Year of program commencement
<b>DLPRMD</b> (derived variable): Final date (month) of respondent's enrolment in this postsecondary program between January 2002 and December 2003	Month of program termination
<b>DLPRYD</b> (derived variable): Final date (year) of respondent's enrolment in this postsecondary program January 2002 and December 2003	Year of program termination
<b>FTESOID</b> (derived variable): Whether the respondent was FTE in primary, secondary or postsecondary studies for each month of the cycle	<ol style="list-style-type: none"> <li>1. Respondent was enrolled in a postsecondary program on a full-time basis in "January"</li> <li>2. Respondent was a full-time high school student in "January"</li> <li>3. Respondent was a full-time student, status unknown, in "January"</li> </ol>
<b>HSSTATD</b> (derived variable): High school status as of December 2003	<ol style="list-style-type: none"> <li>1. High school graduates</li> <li>2. High school continuers</li> <li>3. High school dropouts</li> </ol>





## Appendix 2

# Formal Pathways in Canada's Education Systems

Information on the various provincial education systems was drawn from a number of studies (Cameron, Dennison and Gallagher, Jones, Clark, Skolnik, Kirby and Oderkirk ) and, above all, from the website of the Council of Ministers of Education in Canada, provincial departments of education and numerous college or universities across the country. These data have allowed us to determine the formal structure of each province's academic tracks. We took into account institutional mandates at each level of education and the transitions between them in light of the pathways available to high school graduates.

### British Columbia

British Columbia's postsecondary education system offers four types of postsecondary institution, with a total of 27 public postsecondary institutions. High school graduates may choose to enter a university, university college, community college or institute of technology. Students in a university transfer program may also earn credits toward a university degree at a community or university college, going on to finish the program at one of the province's universities.

### Alberta

Postsecondary education in Alberta offers high school graduates a range of possibilities through the array of public or private institutions distributed across the province. They may enter university, community colleges, colleges of art and design or institutes of

technology. Some colleges offer university transfer programs, enabling students to earn credits toward an undergraduate degree under institutional agreements.

### Saskatchewan

Saskatchewan's postsecondary education system consists of universities, regional colleges and the Saskatchewan Institute of Applied Science and Technology, a multi-campus institution. High school graduates in the province can enter a private institution for technical or business administration training; enter a college for more general or pre-university training (offered by an affiliated or associate university); or go straight into a university program.

### Manitoba

In Manitoba, high school graduates wishing to pursue postsecondary studies have two options: university or community/university colleges. Colleges in some regions give students access to university-level courses leading to a degree.

### Ontario

Ontario currently boasts 25 colleges of applied arts and technology (CAAT) and 19 public universities. Young Ontarians wishing to enter postsecondary studies can choose between these two types of institution. If they opt for the CAAT system, then, depending on the field of study, certain course credits can be transferred to a university program.

## Quebec

Postsecondary education in Quebec is provided by 9 universities and 48 public colleges (CEGEPS — colleges of general and vocational education) and by a number of private colleges. High school graduates in Quebec wishing to pursue higher education must enrol in college, which offer two-year pre-university programs or three-year terminal technical programs similar to those available in community colleges in other provinces. CEGEP studies lead to a college diploma (DEC) or equivalent, which is the prerequisite for admission to an undergraduate university degree program.<sup>19</sup>

## New Brunswick

New Brunswick's education system does not offer a wide range of choices to high school graduates wishing to pursue postsecondary studies. Students in the province may go directly to university or enrol in one of 11 community colleges. They may also choose to undergo technical training in industries like forestry and fishing at an institute of technology.

## Nova Scotia

High school graduates in Nova Scotia have two options with regard to postsecondary education within the province: university or community college.

## Prince Edward Island

Prince Edward Island has one community college and one university, giving two options to young people who wish to pursue higher education. Holland College offers an individualized performance-based instructional system (STEP: Self-Training and Evaluation Process) as well as vocational and technological training (Jones, 1997: 254).

## Newfoundland and Labrador

The public postsecondary education system in Newfoundland and Labrador consists of one university (Memorial University) and five Regional Colleges of Applied Arts, Technology and Continuing Education. Depending on the field of study, some college courses can be credited toward a university degree. The province also has a number of maritime institutions offering technical and vocational training.

19. An individual may be admitted to university without a DEC if he or she is aged 21 and can attest to a year of experience in the chosen field of study.